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Complete specification for the invention entitled:

PURIFICATION OF BARK AND WOOD EXTRACTS
FOR WOOD ADHESIVES

The following statement is a full description of this invention,
including the best method of performing it known to us :-

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*Veneer species; Coachwood (*Ceratopetalum apetalum*),
Tulip Oak (*Argyrodendron* sp.), veneer moisture
content; 5%, 12%, assembly time; 2 hour, 2 hour for
fractions ($<10^6$ molecular size) and ($10^3 - 10^6$),
5 respectively.

The nominal molecular weight limits (NMWL) of the
membranes used here are applicable only for the
fractionation of *Pinus radiata* bark extracts and
particularly PSVP membrane with NMWL 10^6 was used only
10 as a suitable membrane for removing high polymeric
materials at this moment. Consequently, it is necessary
to select the most suitable membranes according to the
purpose of the process in order to fractionate and
purify the extracts from other barks or woods.

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THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:

1. A method for producing a low viscosity material from bark or wood suitable for use in a formaldehyde-condensation adhesive, which method comprises subjecting a conventional aqueous extract of bark or wood to ultrafiltration and separating out that fraction which does not contain the high viscosity producing materials.
2. A method as claimed in claim 1 and including the additional step of subjecting the separated fraction to a second ultrafiltration in order to remove those materials having an equivalent molecular weight of less than 10^3 .
3. A method as claimed in claim 2 and wherein the permeate is subjected to reverse osmosis in order to separate those materials having an equivalent molecular weight of less than 10^3 from the water.
4. A method as claimed in any one of the preceding claims wherein a membrane with NMWL of 10^6 is used in the only or first ultrafiltration step.
5. A method as claimed in claim 2 or 3. or claim 4 when appended to claim 2 or claim 3, wherein a membrane with NMWL of 10^3 is used for the second ultrafiltration step.
6. A method as claimed in any one of claims 3, or 4 or 5 when dependent on claim 3, wherein a membrane with NMWL of 350 is used for the reverse osmosis.
7. A method as claimed in any one of the preceding claims, wherein an extract of pinus radiata bark is used.

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8. A method as claimed in claim 7 wherein the extract is a hot aqueous extract which has been adjusted to a pH of 8 with an hydroxide.
9. A low viscosity material suitable for use in a formaldehyde-condensation adhesive whenever produced by a method defined in any one of the preceding claims.
10. A formaldehyde-condensation adhesive with uniform quality when made from a material as defined in claim 9.
11. A method as claimed in claim 1 of producing a low viscosity material from bark or wood suitable for use in a formaldehyde-condensation adhesive substantially as herein described with reference to the laboratory experimental data or accompanying drawing..
12. A formaldehyde-condensation adhesive as claimed in claim 10 substantially as herein described with reference to the laboratory experimental data or accompanying data.

DATED this 14th day of October, 1983

COMMONWEALTH SCIENTIFIC AND INDUSTRIAL RESEARCH
ORGANIZATION

by its Patent Attorneys

DAVIES & COLLISON.

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